This is a report on the joint work in progress with N. Semenov, V. Petrov and K. Zainoulline. Motivated by the motivic Galois group approach, we relate the category of cobordism-motives of twisted flag varieties for a linear algebraic group $G$ with the category of integer (or modular) representations of the associated Hecke-type algebra $H$ for $G$ introduced and studied in a series of papers by Calmes, Savage, Zhong and others. In this way, we translate various motivic discrete invariants (e.g. $J$-invariant of linear algebraic groups), results about indecomposable motives and upper motives (Karpenko-Merkuriev-Vishik), etc, into the language of respective integer/modular representations of $H$. 